UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,125	01/12/2005	Lu Tian	139369USPCT	6511

7590 09/12/2005

Alcatel
Intellectual Property Department
3400 W Plano Parkway
M S Legl2
Plano, TX 75075

EXAMINER	
AJIBADE AKONAI, OLUMIDE	
ART UNIT	**PAPER NUMBER**
2686	

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/521,125	TIAN ET AL.	
	Examiner	Art Unit	
	Olumide T. Ajibade-Akonai	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 12-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,14-18 and 20-24* is/are rejected.

7)☒ Claim(s) *12,13 and 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/12/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by **Nevo et al (6,320,873)**.

Regarding **claim 1**, Nevo et al discloses a method for transferring information (data packets or packet data units, see col. 7, lines 3-6, 36-38) from a network (GPRS 50 connected to packet data network 48, see fig. 1, col. 5, lines 39-40) via an interface incompatible with the network (CDMA Um interface, see fig. 2, col. 6, lines 40-41) to a mobile device that is compatible with both the network and the interface (MS 40 is capable of communicating with both GSM an d CDMA BSS, see fig. 1, col. 5, lines 14-22), the method comprising: establishing a communication channel (MS 40 communicates with GSM SGSN 52 over a CDMA air interface between MS 40 and BSS 32, see fig. 2A, col. 6, lines 12-18) between the mobile device and a switch (GSM SGSN 52, see col. 6, lines 13-18), wherein the switch is accessible to the network (data packets are transmitted from the SGSN 52 to the GGSN 54, see figs. 1 and 2B, col. 7, lines 19-23, 36-47) and is adapted to send and receive messages compatible with both the network and interface using functionality inherited directly from the network and

interface (MS 40 can receive and transmit data streams from GPRS 50 through BSS 32 and SGSN 52 and the Gm, Gb, and Gn interfaces using the CDMA and GSM communication protocols, see col. 7, lines 60-67, and col. 8, lines 1-3); receiving information from the network (TCP or UDP packets can be transmitted to the GGSN, or from the GGSN to the SSGN for transport to the MS 40, see col. 7, lines 36-47, 60-65) inserting the information into a first message (inherent since a GPRS tunneling protocol is known to comprise a header and user data that is used to encapsulate data packets, see col. 7, lines 29-47, 60-65) compatible with the interface (TCP or UDP packets are encapsulated using GPRS tunneling protocol, see col. 7, lines 43-47, 60-65); and transferring the first message to the mobile device via the interface (TCP or UDP packets can be transmitted to the GGSN 54, or from the GGSN 54 to the SSGN 52 for transport to the MS 40 through CDMA Um interface, and the same protocols are utilized for signaling and data transport from the GPRS 50 to MS 40, see fig. 2, col. 6, lines 40-41, col. 7, lines 36-47, 60-65).

Regarding **claim 16**, Nevo et al discloses a method for transferring GSM-based information between a GSM communications system and a GSM/CDMA compatible mobile device via a CDMA interface (MS 40 can receive and transmit data streams from GPRS 50 through BSS 32 and SGSN 52 and the Gm, Gb, and Gn interfaces using the CDMA and GSM communication protocols, see col. 7, lines 60-67, and col. 8, lines 1-3), the method comprising: establishing a CDMA channel between the mobile device (MS 40 communicates with GSM SGSN 52 over a CDMA air interface between MS 40 and BSS 32, see fig. 2A, col. 6, lines 12-18) and a switch (GSM SGSN 52, see col. 6, lines

13-18), wherein the switch is accessible to the GSM network (data packets are transmitted from the SGSN 52 to the GGSN 54, see figs. 1 and 2B, col. 7, lines 19-23, 36-47) and adapted to send and receive both GSM and CDMA messages (MS 40 can receive and transmit data streams from GPRS 50 through BSS 32 and SGSN 52 and the Gm, Gb, and Gn interfaces using the CDMA and GSM communication protocols, see col. 7, lines 60-67, and col. 8, lines 1-3), and wherein the switch establishes the channel using a base station system application part and radio resource manager inherited from the CDMA interface (CDMA BSS 32 comprises a RLC layer that includes a MAC function for controlling access signaling for CDMA radio channels, see fig. 2A, col. 6, lines 40-59), receiving, via a mobility management agent (mobility management functions are supported by a GSM GPRS mobility management and session management protocol layer, see col. 6, lines 31-39) inherited by the switch from the GSM system GSM-based information from the GSM network (location update and routing area update are received by the mobility management and session management protocol layer, see col. 6, lines 31-39), inserting the information into a CDMA message, and transferring the CDMA message to the mobile device via the CDMA interface (TCP or UDP packets are encapsulated using GPRS tunneling protocol, and the encapsulated TCP or UDP packets are transmitted to the GGSN 54, and the same principle is applied to communication of data over CDMA air interface see col. 7, lines 43-47, 60-65).

Regarding **claim 18**, as applied to claim 16, Nevo et al further discloses further comprising receiving CDMA information from the mobile device (LLC data packets are

received by the SGSN 52 from MS 40, see col. 7, lines 36-38), and converting the CDMA information into GSM information for compatibility with the GSM network (SGSN translates the data packets into TCP or UDP packets which are then encapsulated and sent to the GGSN 54, see col. 7, lines 36-47).

Claims 8 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by **Ramaswamy (6,480,717)**.

Regarding **claim 8**, Ramaswamy discloses A method for manipulating data by a mobile station (mobile station 36, see fig. 2, col. 2, line 45), wherein the mobile station is compatible with at least first and second incompatible telecommunications protocols (inherent, since the mobile station 36 receives a message from the GSM SGSN 40 a message capsule containing one or more non-GSM messages communicated by non-GSM MSC 46, therefore indicating that the mobile station 36 is capable of receiving a GSM and non-GSM message and has the capability of GSM and non-GSM protocols, see fig. 2, col. 4, lines 44-52, 60-67), the method comprising: receiving a first message (TOM protocol envelope, see fig. 5, col. 5, lines 3-21) using the first protocol (GSM protocol, see fig. 2, col. 2, lines 53-55), identifying information in the first message compatible with the second protocol (mobile station 36 determines if the TOM protocol envelope received is supported by the mobile station 36, see col. 5, lines 28), extracting the identified information from the first message (mobile station 36 extracts one or more messages from the TOM protocol envelope, see col. 5, lines 23-28), and processing the extracted information using the second protocol (mobile station 36 processes the extracted one or more messages, see col. 5, lines 27-28).

Regarding **claim 9**, as applied to claim 8, Ramaswamy et al further discloses further comprising inserting information compatible with the second protocol (non-GSM messages, see col. 4, lines 28-30) into a second message compatible with the first protocol (TOM protocol envelope 48, see col. 3, lines 18), and transmitting the second message via an interface using the first protocol (the TOM protocol envelope includes a message capsule 52 containing the message to be transmitted to the non-GSM mobile switching center 46, and the TOM protocol envelope is forwarded from the SGSN 40 o the non-GSM MSC 46, see col. 3, lines 22-29, col. 4, lines 7-16).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 3, 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nevo et al (6,320,873)** in view of **Ramaswamy (6,480,717)**.

Regarding **claim 2**, as applied to claim 1, Nevo et al discloses the claimed invention except further comprising extracting the information from the first message to recover the inserted information.

In the same field of endeavor, Ramaswamy discloses extracting the information from the first message (TOM protocol envelope, see fig. 5, col. 5, lines 3-21) to recover the inserted information (mobile station 36 extracts one or more messages from the TOM protocol envelope, see col. 5, lines 23-28).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Ramaswamy into the system of Nevo et al for the benefit of providing a method of transmitting and receiving messages from a non-GSM mobile switching center.

Regarding **claim 3**, as applied to claim 2, Nevo et al discloses the claimed invention except further comprising processing the extracted information.

In the same field of endeavor, Ramaswamy discloses processing the extracted information (mobile station 36 processes the extracted one or more messages, see col. 5, lines 27-28).

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Nevo et al and Ramaswamy for the benefit of providing a method of transmitting and receiving messages from a non-GSM mobile switching center.

Regarding **claim 7**, as applied to claim 1, Nevo et al discloses the claimed invention except further comprising identifying a preselected field in the first message, wherein the information is inserted into the preselected field.

In the same field of endeavor, Ramaswamy et al discloses identifying a preselected field (message field 76, see fig. 5, col. 5, lines 43-47) in the first message (TOM protocol envelope 60, see fig. 5, col. 5, lines 3-7), wherein the information is inserted into the preselected field (message field 76 provide octets belonging to a given message, see fig. 5, col. 5, lines 43-47).

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Nevo et al and Ramaswamy for the benefit of providing a method of transmitting and receiving messages from a non-GSM mobile switching center.

Regarding **claim 20**, as applied to claim 16, Nevo et al discloses the claimed invention except extracting the GSM information from the CDMA message, and processing the extracted GSM information.

In the same field of endeavor, Ramaswamy et al discloses extracting the GSM information from the CDMA message (mobile station 36 extracts one or more messages from the TOM protocol envelope, see col. 5, lines 23-28), and processing the extracted GSM information (mobile station 36 processes the extracted one or more messages, see col. 5, lines 27-28).

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Nevo et al and Ramaswamy for the benefit of providing data transfer between a non-GSM mobile switching center and an SGSN.

5. Claims 4, 5, 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nevo et al (6,320,873)** in view of **Jain et al (20030112785)**.

Regarding **claim 4**, as applied to claim 1, Nevo et al discloses the claimed invention except wherein establishing the communication channel occurs prior to authenticating the mobile device in the network.

In the same field of endeavor, Jain et al discloses except wherein establishing the communication channel (see fig. 1, p.2, [0020]) occurs prior to

authenticating the mobile device in the network (voice and computer data communication occurs between the CDMA RAN 12 and MS 18,20, and then between the CDMA RAN 12 and GSM core infrastructure 14 and IS-41 core infrastructure 15, see fig. 1, p.2, [0020]-[0022]).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Jain et al into the system of Nevo et al for the benefit of supporting wireless communication between a CDMA and GSM network.

Regarding **claim 5**, as applied to claim 4, the combination of Nevo et al and Jain et al disclose the claimed invention. In addition, Nevo et al further discloses receiving a second message (LLC data packets, see col. 7, lines 36-37) from the mobile device via the interface (CDMA BSC 34 communicates with SGSN 52 through the Gb interface, see fig. 1, col. 7, lines 11-14, 36-38), wherein the second message is compatible with the interface (see col. 7, lines 11-14), and converting the second message received via the interface into information compatible with the network (LLC data packets received by the SGSN 52 are translated into TCP or UDP packets for transfer to the GGSN 54, see fig. 2B, col. 7, lines 36-47).

Regarding **claim 6**, as applied to claim 5, the combination of Nevo et al and Jain et al disclose the claimed invention, in addition, Nevo et al further discloses inserting information compatible with the network into the second message (TCP or UDP packets are encapsulated by a GPRS tunneling protocol, see col. 7, lines 43-47).

Regarding **claim 17**, Nevo et al discloses the claimed invention as applied to claim 16 except wherein establishing the communication channel occurs prior to authenticating the mobile device in the network.

In the same field of endeavor, Jain et al discloses except wherein establishing the communication channel (see fig. 1, p.2, [0020]) occurs prior to authenticating the mobile device in the network (voice and computer data communication occurs between the CDMA RAN 12 and MS 18,20, and then between the CDMA RAN 12 and GSM core infrastructure 14 and IS-41 core infrastructure 15, see fig. 1, p.2, [0020]-[0022]).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Jain et al into the system of Nevo et al for the benefit of supporting wireless communication between a CDMA and GSM network.

6. Claims 10, 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jain et al (20030112785)** in view of **Nevo et al (6,320,873)**.

Regarding **claim 10**, Jain et al discloses a system for enabling communications between a mobile unit (mobile stations 18, 20, see fig. 1, p.2, [0022]) and a network (IS-41 core 15 or GSM core 14, see fig. 1, p.2, [0020]) over an air interface (see fig. 1, p.2, [0020]), wherein the network and interface are based on first and second incompatible protocols (GSM and IS-41 protocol, see p.1, [0008]), p.2, [0024]), respectively, and wherein the mobile unit is compatible with both protocols (MS 18 is a GSM-enabled dual CDMA mobile station, see fig. 1, p.2, [0022]), the system comprising: a call controller inherited directly from the network (GSM AUC 14a, see fig. 1, p.3, [0027]) and adapted

for using the first protocol (MSC 24 authenticates the MS using GSM protocols, see p.3, [0027]), a mobility manager inherited directly from the network and adapted for using the first protocol and accessible to the call controller (inherent, since the MSC 24 determines based on the international mobile subscriber identity IMSI whether the MS has a subscription in the GSM core infrastructure, and this requires a mobility manager functionality in the MSC see fig. 1, p.2, [0024]-[0026]), at least a portion of a base station inherited directly from the interface and adapted for using the second protocol (CDMA RAN 12, see fig. 1, p.2, [0025]).

Jain et al fails to disclose a message converter accessible to the call controller and the base station portion, wherein the message converter is adapted to convert information compatible with the first or second protocol into information compatible with the other protocol.

In the same field of endeavor, Nevo et al discloses a message converter (SSGN 52, see fig. 2A, col. 6, lines 13-18) accessible to the call controller and the base station portion (see fig. 2A, and 2B, col. 6, lines 18-39), wherein the message converter is adapted to convert information compatible with the first or second protocol into information compatible with the other protocol (TCP or UDP packets are encapsulated using GPRS tunneling protocol, and the encapsulated TCP or UDP packets are transmitted to the GGSN 54 see col. 7, lines 43-47, 60-65).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Nevo et al into the system of Jain et al for the benefit of conveying packet-switched data through a cellular communications network.

Regarding **claim 14**, as applied to claim 10, Jain et al further discloses wherein the first protocol is a Global system for mobile communications protocol GSM and wherein the second protocol is a code division multiple access CDMA protocol (GSM and IS-41 protocol, see p.1, [0008]), p.2, [0024]).

Regarding **claim 15**, as applied to claim 10, Jain et al further discloses wherein the second protocol is a Global system for mobile communications GSM protocol and wherein the first protocol is a code division multiple access CDMA protocol (inherent, since the stated order of protocols could be either of GSM and IS-41 protocol, see p.1, [0008]), p.2, [0020]).

Regarding **claim 24**, Jain et al discloses a hybrid mobile switching center (hybrid mobile switching center 24, see fig. 1, p.2, [0024]) for enabling communication between otherwise incompatible first and second telecommunication technologies (IS-41 core 15 or GSM core 14, see fig. 1, p.2, [0020]), the hybrid mobile switching center comprising: a call control agent inherited from the first technology (GSM AUC 14a, see fig. 1, p.3, [0027]), a mobility management agent inherited from the first technology, wherein the mobility management agent is accessible to the call control agent (inherent, since the MSC 24 determines based on the international mobile subscriber identity IMSI whether the MS has a subscription in the GSM core infrastructure, and this requires a mobility manager functionality in the MSC see fig. 1, p.2, [0024]-[0026]), and wherein the call control agent, the mobility management agent and the base station system application part and radio resource manager are inherited from their respective technologies without altering their configuration.

Jain et al fails to disclose a base station system application part and radio resource manager inherited from the second technology, and a message converter module accessible to the mobility management agent and the base station system application part, wherein the message converter module is configured to convert messages received from the mobility management agent into the second technology and messages received from the base station system application part into the first technology.

In the same field of endeavor, Nevo et al discloses a base station system application part and radio resource manager inherited from the second technology (CDMA BSS 32 comprises a RLC layer that includes a MAC function for controlling access signaling for CDMA radio channels, see fig. 2A, col. 6, lines 40-59), and a message converter module (SSGN 52, see fig. 2A, col. 6, lines 13-18) accessible to the mobility management agent and the base station system application part (see fig. 2A, and 2B, col. 6, lines 18-39) wherein the message converter module is configured to convert messages received from the mobility management agent into the second technology and messages received from the base station system application part into the first technology (TCP or UDP packets are encapsulated using GPRS tunneling protocol, and the encapsulated TCP or UDP packets are transmitted to the GGSN 54, and the same protocols are utilized for signaling and data transport from the GPRS 50 to MS 40, see col. 7, lines 43-47, 60-65).

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Jain et al and Nevo et al for the benefit of conveying CDMA encoded data between the GPRS and mobile station.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Nevo et al (6,320,873)** in view of **Holcman et al (20040072563)**.

Regarding **claim 19**, as applied to claim 16, Nevo et al discloses the claimed invention except wherein the CDMA message is an "ADDS DELIVER" message, and wherein inserting the GSM information into the CDMA message includes identifying a predetermined field in the "ADDS DELIVER" , wherein he predetermined field is used tom store the GSM information.

In the same field of endeavor, Holcman et al teaches wherein the CDMA message is an "ADDS DELIVER" message (see p.7, [0071]), and wherein inserting the GSM information into the CDMA message includes identifying a predetermined field in the "ADDS DELIVER", wherein he predetermined field is used tom store the GSM information (see p.6, [0065], [0069], p. 7, [0070]-[0071]).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching Holcman et al into the system of Nevo et al for the benefit of providing a hybrid system without multiple SIM cards or authentication centers.

8. Claim 21 rejected under 35 U.S.C. 103(a) as being unpatentable over **Ramaswamy (6,480,717)** in view of **Nevo et al (6,320,873)**.

Regarding **claim 21**, Ramaswamy discloses a method for transferring CDMA-based information between a CDMA communications system (non-GSM mobile

switching center 46, see col. 2, lines 41-43, 50-53) and a GSM/CDMA compatible mobile device via a GSM interface (MS 18 is a GSM-enabled dual CDMA mobile station, see fig. 1, p.2, [0022]), the method comprising: establishing a GSM channel between the mobile device and a switch (inherent, the non-GSM messages can be transmitted thorough the SGSN to the mobile station, indicating that a GSM channel would have been required to establish the communication between the SGSN 40 and the mobile station 36, see col. 4, lines 32, and 44-52), wherein the switch (SGSN 40, see fig. 2, col. 2, line 47) is accessible to the CDMA network and adapted to send and receive both GSM and CDMA messages (SGSN receives non-GSM messages from the MSC 46 and SGSN sends forwards the message to mobile station 36 through the TOM envelope, and the mobile switching center receives TOM envelope from the mobile station 36 and forwards the message to the mobile switching center 46, see col. 3, lines 29, col. 4, lines 7-16, 28-35, 60-67) and wherein the switch establishes the channel using functionality inherited directly from the GSM interface (inherent, the non-GSM messages can be transmitted thorough the SGSN 40 to the mobile station 36, indicating that a GSM channel functionality in the SGSN would have been required to establish the communication between the SGSN 40 and the mobile station 36, see col. 4, lines 32, and 44-52), receiving, via functionality inherited by the switch from the CDMA system CDMA-based information from the CDMA network (MSC 46 sends non-GSM messages to the mobile station 36 through SGSN 40, see col. 4, lines 28-35), inserting the information into a GSM message (SGSN 40 constructs a TOM envelope containing the message from the MSC 46, see col. 4, lines 48), and transferring the GSM message

to the mobile device via the GSM interface (TOM protocol envelope constructed by SGSN 40 is sent to the mobile station 36, see col. 4, lines 60-63).

Ramaswamy fails to disclose CDMA-based information, GSM/CDMA compatible mobile device, and a CDMA based communications system.

In the same field of endeavor, Nevo et al discloses CDMA-based information (MS 40 can receive and transmit data streams from GPRS 50 through BSS 32 and SGSN 52 and the Gm, Gb, and Gn interfaces using the CDMA and GSM communication protocols, see col. 7, lines 60-67, and col. 8, lines 1-3), GSM/CDMA compatible mobile device (MS 40 is capable of communicating with both GSM an d CDMA BSS, see fig. 1, col. 5, lines 14-22), and a CDMA based communications system (CDMA BSS 32, see fig. 1, col. 5, lines 21-25).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Nevo et al into the system of Ramaswamy for the benefit of enabling a GSM mobile switching center to control a plurality of CDMA base stations in a mixed GSM/CDMA system.

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ramaswamy (6,480,717)** in view of **Nevo et al (6,320,873)** as applied to claim 21 above, and further in view of **Jain et al (20030112785)**.

Regarding **claim 22**, as applied to claim 21, the combination of Ramaswamy and Nevo et al disclose the claimed invention except wherein establishing the communication channel occurs prior to authenticating the mobile device in the network.

In the same field of endeavor, Jain et al discloses except wherein establishing the communication channel (see fig. 1, p.2, [0020]) occurs prior to authenticating the mobile device in the network (voice and computer data communication occurs between the CDMA RAN 12 and MS 18,20, and then between the CDMA RAN 12 and GSM core infrastructure 14 and IS-41 core infrastructure 15, see fig. 1, p.2, [0020]-[0022]).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Jain et al into the system of Ramaswamy and Nevo et al for the benefit of supporting wireless communication between a CDMA and GSM network.

Regarding **claim 23**, as applied to claim 21, the combination of Ramaswamy and Nevo et al disclose the claimed invention, in addition, Ramaswamy further discloses receiving GSM information from the mobile device (mobile station 36 sends TOM protocol envelope to SGSN 40, see col. 3, lines 9-14, 24-29), and converting the GSM information into information for compatibility with the CDMA network (see col. 4, lines 16).

Ramaswamy and Nevo et al do not disclose a CDMA network.

In the same field of endeavor, Jain et al discloses CDMA network (IS-41 core 15, see fig. 1, p.2, [0020]).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Jain et al into the system of Ramaswamy and Nevo et al for the benefit of supporting wireless communication between a CDMA and GSM network.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Jain et al (20030112785)** in view of **Nevo et al (6,320,873)** as applied to claim 10 above, and further in view of **Ramaswamy (6,480,717)**.

Allowable Subject Matter

10. Claims 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Grilli et al (6,438,117) discloses a base station synchronization for handover in a hybrid GSM/CDMA network.

Nevo et al (6,813,256) discloses signaling data link for a GSM/CDMA air interface.

Keskitalo et al (5,920,553) discloses a data transmission method, base station equipment, and mobile station.

Durchmann et al (5,664,004) discloses support of multiplicity of radio interfaces over an interface between a base station system and a mobile switch.

Tsao discloses an efficient tunneling protocol for General Packet Radio Service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olumide T. Ajibade-Akonai whose telephone number is 571-272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marsha D Banks-Harold

MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

OA